



METHODS OF LEARNING TECHNIQUE
OF "LOW-KICK" AND "FRONT-KICK"
KICKBOXERS OF 12-14 YEARS AT THE
STAGE OF PRELIMINARY BASIC TRAINING

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Annotation

The article reveals the features of technical training of young kickboxers aged 12-14, which is an important component of the integrated training of young athletes. Methods of improvement of shock techniques with feet "Low-kick" and "Front-kick" at a stage of preliminary basic preparation which studying plays the basic role in training of technical actions at mastering of the following more difficult elements are considered. The selection of these techniques will provide an opportunity to improve their skills and can increase the focus of the learning process in kickboxing, making it more rational in the subsequent stages. The hypothesis of this study is to scientifically predict the possibility of improving the technical training of young kickboxers by improving teaching methods, focusing on the study and improvement of the simplest kicks as a basis for further study of other techniques. The purpose of the study is to develop a method of teaching the technique of hitting "Low-kick" and "Front-kick" kickboxers 12-14 years at the stage of preliminary basic training.

Objectives of the study. 1. Analyze the scientific and methodological literature on the research topic. 2. To study the role of technical training for athletes 12-14 years and its importance in kickboxing. 3. Determine the level of physical fitness of kickboxers. 4. To propose and experimentally substantiate methods of improvement of blows "Low-kick" and "Front-kick" and to diagnose the level of technical skill of young kickboxers.

Material and methods. The study used methods of analysis of scientific literature, pedagogical observation, pedagogical testing, pedagogical experiment, mathematical statistics. The study included pedagogical observation of the training process of 10 athletes aged 12-14 years at the stage of preliminary basic training, control testing and further processing of the results.

Results. The experiment proved the effectiveness of the proposed method by increasing the quantitative effectiveness of the blows, the accuracy of the hit, the rationality of the technique of performing techniques. Given the growth of indicators of physical fitness suggests that the method that we have recommended and implemented has not affected the stagnation of indicators of development of physical qualities. A significant increase in all indicators of technical readiness of kickboxers was revealed ($p \leq 0.05$).

Conclusion. Analysis of the literature has shown that the basis of technical training in kickboxing are kicks and punches, which affect the effectiveness of competitive activities. At the stage of preliminary basic training, training is carried out mainly by kicks, namely: Front-kick, Low-kick, Mawashi, Ex-kick, Beck-kick. Learning these strikes has a sequence that depends on their complexity, and first of all much attention is paid to the strikes "Low Kick" and "Front Kick" as the fundamental simplest elements that serve as a basis for learning the next more complex exercises. Our proposed teaching method had its own sequence of use, which had a positive effect on the gradual improvement of the results of technical skills. This gives us the opportunity to argue about its effectiveness at this stage of training.

Key words: impact technique, technical training, kickboxers, preliminary basic training.

Анотація

В статті розкрито особливості технічної підготовки юних кікбоксерів 12-14 років, яка є важливою складовою інтегральної підготовленості юних спортсменів. Розглянуто методи удосконалення ударних прийомів ногами «Лоу-кік» і «Фронт-кік» на етапі попередньої базової підготовки, вивчення яких відіграє основну роль в навчанні технічним діям при засвоєнні наступних більш складних елементів. Виділення саме цих прийомів, надасть можливість удосконалити їх майстерність та може підвищити цілеспрямованість процесу навчання в кікбоксингу зробивши його більш раціональним на послідуєчих етапах. Гіпотеза даного дослідження полягає у науковому передбаченні можливості підвищення рівня технічної підготовленості юних кікбоксерів шляхом вдосконалення методики навчання, акцентуючи увагу на вивчення та вдосконалення найпростіших ударів ногою, як основи для подальшого вивчення інших технічних прийомів. Метою дослідження є розробка методики навчання техніки ударів «Лоу-кік» і «Фронт-кік» кікбоксерів 12-14 років на етапі попередньої базової підготовки.

Завдання дослідження. 1. Проаналізувати науково-методичну літературу щодо теми дослідження. 2. Вивчити роль технічної підготовленості для спортсменів 12-14 років і її значення у кікбоксингу. 3. Визначити рівень фізичної підготовленості кікбоксерів. 4. Запропонувати та експериментально обґрунтувати методи удосконалення ударів «Лоу-кік» і «Фронт-кік» та діагностувати рівень технічної майстерності юних кікбоксерів.

Матеріал і методи. У дослідженні використовувалися методи аналізу наукової літератури, педагогічного спостереження, педагогічне тестування, педагогічний експеримент, математичної статистики. Дослідження передбачало педагогічне спостереження за тренувальним процесом 10 спортсменів 12-14 років на етапі попередньої базової підготовки, проведення контрольного тестування і подальша обробка отриманих результатів.

Результати. Проведений експеримент довів ефективність запропонованої методики збільшенням кількісної результативності нанесення ударів, точністю попадання, раціональністю техніки виконання прийомів. Ріст показників саме фізичної підготовленості свідчить про те, що методика, яка була нами рекомендована та впроваджена, не вплинула на застій показників розвитку фізичних якостей. Виявлено достовірний приріст усіх показників технічної підготовленості кікбоксерів ($p \leq 0,05$).

Висновок. Аналіз літератури показав, що основу технічної підготовки у кікбоксингу складають удари ногами та руками, які впливають на результативність змагальної діяльності. На етапі попередньої базової підготовки навчання здійснюється переважно ударами ногами, а саме: Фронт-кік, Лоу-кік, Маваші, Екс-кік, Бек-кік. Навчання даним ударами має свою послідовність, яка залежить від їх складності, а насамперед велику увагу приділяють ударами «Лоу-кік» і «Фронт-кік» як фундаментальних найпростіших елементів, які слугують певною базою для вивчення наступних більш складних вправ. Запропонована нами методика навчання мала свою послідовність використання, яка позитивно вплинула на поступове покращення результатів технічної майстерності. Що дає нам можливість стверджувати про її ефективність використання на даному етапі навчання.

Ключові слова: техніка удару, технічна підготовка, кікбоксери, попередньо базова підготовка.

Аннотация

В статье раскрыты особенности технической подготовки юных кикбоксеров 12-14 лет, которая выступает важной составляющей интегральной подготовленности юных спортсменов. Рассмотрены методы совершенствования ударных приемов ногами «Лоу-кик» и «Фронт-кик» на этапе предварительной базовой подготовки, изучение которых играет основную роль в обучении техническим действиям при обучении последующих более сложных элементов. Выделение именно этих приемов, даст возможность совершенствовать их мастерство и может повысить целенаправленность процесса обучения в кикбоксинге, сделав его более рациональным на последующих этапах подготовки. Гипотеза данного исследования заключается в научном предвидении возможности повышения уровня технической подготовленности юных кикбоксеров путем совершенствования методики обучения, акцентируя внимание на изучение и совершенствование простейших ударов ногой, как основы для дальнейшего изучения других технических приемов. Целью исследования является разработка методики обучения технике ударов «Лоу-кик» и «Фронт-кик» кикбоксеров 12-14 лет на этапе предварительной базовой подготовки.

Задачи исследования. 1. Проанализировать научно-методическую литературу по теме исследования. 2. Изучить роль технической подготовленности спортсменов 12-14 лет и ее значение в кикбоксинге. 3. Определить уровень физической подготовленности кикбоксеров. 4. Предложить и экспериментально обосновать методы совершенствования ударов «Лоу-кик» и «Фронт-кик» и диагностировать уровень технического мас-

терства юных кикбоксеров.

Материал и методы. В исследовании использовались методы анализа научной литературы, педагогическое наблюдение, педагогическое тестирование, педагогический эксперимент, математической статистики. Исследование предусматривало педагогическое наблюдение тренировочного процесса 10 спортсменов 12-14 лет на этапе предварительной базовой подготовки, проведения контрольного тестирования и последующая обработка полученных результатов.

Результаты. Проведенный эксперимент доказал эффективность предложенной методики увеличением количественной результативности нанесения ударов, точностью попадания, рациональностью техники выполнения приемов. Учитывая рост показателей физической подготовленности, говорит о том, что методика, которая была нами рекомендована и внедрена, не повлияла на застой показателей развития физических качеств. Выявлено достоверный прирост всех показателей технической подготовленности кикбоксеров ($p \leq 0,05$).

Вывод. Анализ литературы показал, что основу технической подготовки в кикбоксинге составляют удары ногами и руками, которые влияют на результативность соревновательной деятельности. На этапе предварительной базовой подготовки обучение осуществляется преимущественно ударам ногами, а именно: Фронт-кик, Лоу-кик, Маваши, Экс-кик, Бек-кик. Обучение данным ударам имеет свою последовательность, которая зависит от их сложности, а прежде всего большое внимание уделяют ударам «Лоу-кик» и «Фронт-кик» как фундаментальных простейших элементов, которые служат определенной базой для изучения последующих более сложных упражнений. Предложенная нами методика обучения имела свою последовательность использования, которая положительно повлияла на постепенное улучшение результатов технического мастерства. Что дает нам возможность утверждать о ее эффективности использования на данном этапе обучения.

Ключевые слова: техника удара, техническая подготовка, кикбоксеры, предварительно базовая подготовка.

Introduction. Kickboxing as a sport has recently gained more popularity in society, has become widespread and is becoming a kind of source of continuous improvement of training methods around the world. The level of integrated training of kickboxers is constantly growing, which inspires and obliges athletes to make significant progress in their sports activities on a daily basis. The whole basis of obtaining high sports results and achieving one's own goal begins to form in childhood. During the period of basic training, the foundation of various aspects of training is expanded and strengthened, the general arsenal of motor actions is supplemented, the attitude to mastering techniques is formed, the basic mechanism of improvement is studied, rhythmic structure is formed and so on. This age has a number of features that must be taken into account when building a training process, this period is most favorable for improving the technique of speed and strength characteristics of various kicks, which can become the crown and be effectively used in

competitions. Therefore, choosing a topic for research, we relied on all the factors that affected the athlete's ability to kickboxing, and the choice was made to the age range of 12-14 years, the most favorable for improving the technique of kicking.

For successful kickboxing and kickboxing, first of all it is necessary to master the technique of this type of wrestling [1, 2, 9]. Many scientists at the stage of pre-basic training pay special attention to the basics of technical skills as part of competitive activities. Some scientists believe that the technique of kickboxing is a set of techniques of defense and attack, rationally combining elements of boxing, karate and other martial arts [3, 6]. Expressing their opinion, experts emphasize that the technique is understood as such rationality of movements, which is able to ensure maximum efficiency of actions performed by a kickboxer to perform the main task - victory over the opponent [5, 8]. And in the works of scientists it is noted that sports equipment should be understood as a set of techniques and actions that provide the most effective

solution of motor problems due to the specifics of a particular sport, its discipline, type of competition [4, 7].

Technical training of the athlete should be aimed at studying and improving the technique of movements inherent in this sport. According to some scientists, the following tasks must be solved when studying techniques: to get acquainted with new rather wide range of movements; to bring the greatest number of exercises to the level of motor skills, that is, their correct execution when fixing attention; bringing a narrow range of movements to the level of skill, that is, to perform the exercise automatically, stably, variably with the necessary change [9, 10, 12]. And only on the basis of the passed stage of the general technical preparation we systematically pass to special. The result of training in kickboxing is preparedness, which is manifested in the mastery of the athlete's movement system, which corresponds to the characteristics of sports activities, the volume of techniques and actions that he has; the effectiveness of equipment aimed at

achieving high sports results. Technical training cannot be considered in isolation, but should be presented as part of a single whole, in which technical solutions are closely inter-related with the physical, mental, tactical capabilities of the athlete, as well as specific environmental conditions in which the sport is performed [6]. It is natural that the more techniques and actions the athlete has, the more he is prepared to solve complex problems that arise in the process of competition, the more effectively he can resist the attacking actions of the opponent and at the same time put the latter in difficult positions.

All the above opinions of scientists allow us to briefly understand that technology plays an important role in the sports activities of the athlete, his development and achievement of high sports results. Technology is a component that must be constantly assimilated, consolidated, improved depending on the stage and level of preparation. Considering the technique of kickboxing, it can be noted that it covers a large number of elements for study and improvement, combining concepts such as racks, movement, punches, kicks and protection techniques, each of which is an important link for learning and improving skills kickboxers. A lot of time can be spent on technology, considering the various stages, age ranges, skill levels, individual techniques and more. We did not cover the technique of all the elements, but chose a few kicks most used in competitive activities for the bottom age group, based on a deeper study of these elements and ways to improve them.

A kick in kickboxing is an impulsive explosive ballistic motion and can be of different - straight or curved - trajectory. Foot kicks include: direct kick, side kick, semi-circular kick, back straight kick, reverse semicircular kick. The kick should be performed with a feeling of complete balance of the body, with maximum speed and accuracy,

as well as using the strongest muscle groups and putting body weight into the kick. The technique of kicking in any school begins with a direct kick. The main factors are the simplicity of execution, the low demands of this blow to the physical condition of the performer, the ability to keep at a distance the fierce aggressor, stopping him with hard blows, performing a direct kick from close range to the opponent, and finish with a long shot. The next element of the study is the "Low Kick" strike, which is considered very effective in the tactical side of the fight. It is the application of each precise blow that temporarily disorients the opponent or temporarily impairs his ability to actively move around the field and strike counter-blows.

The purpose of the study is to develop a method of teaching the technique of hitting "Low-kick" and "Front-kick" in kickboxing at the stage of preliminary basic training.

Material and methods. To solve this goal in the work used a set of pedagogical research methods in combination with methods of mathematical statistics. The study used methods of analysis of scientific literature, pedagogical observation, pedagogical experiment, mathematical statistics. The study included pedagogical observation of the training process of 10 athletes aged 12-14 years at the stage of preliminary basic training, control testing and further processing of the results.

Organization of the study. The study was conducted during the six-month training cycle 2020-2021 at the stage of preliminary basic training CYSS Dnipro. The dates for determining the control testing were set as follows: the first initial testing took place in mid-August, to determine the level of physical and technical fitness of athletes at the beginning of the school year; the second testing was planned in November, it was intermediate, which allowed to see the effectiveness of the proposed method of improvement; the third test took place in January, it

summed up our study and gave an overview of the effectiveness of our work. The second and third tests were planned according to the competition calendar, which allowed to qualitatively assess the effectiveness of training.

After analyzing the proposed by the CYSS program methods of technical and physical training of kickboxers, we identified 9 effective tools that formed a general idea of the level of physical fitness of kickboxers 12-14 years, namely: 1. Pull-ups on the crossbar - 2 attempts; 2. Squats - 3 attempts; 3. Flexion of the arm extension in the supine position - 3 attempts; 4. Running 60m - 3 attempts; 5. Running 800m - the result was recorded from the first attempt; 6. Shuttle run 4x10m - 3 attempts; 7. Lifting the torso from a supine position. The result from the first attempt was registered; 8. Long jump from a place - 3 attempts; 9. Throwing a stuffed ball (1 kg) - 3 attempts. Prior to these tests, a special form was developed which recorded the best performance of all permitted attempts at each stage of evaluation.

To assess the level of development of technical readiness, 4 tests were selected: 1. Front-kick strike in 30 seconds; 2. Low-kick for 30 seconds; 3. Hit "Low kick in pairs"; 4. Strike "Front kick in pairs". The evaluation was performed by recording the number of strikes with the left and right foot in one round and recorded in the appropriate form.

After analyzing the results of testing physical and technical fitness, a method of improving the technique of kicking "Low-kick" and "Front-kick" was developed and proposed, which included: group study and improvement of reception on the spot under the joint team of the coach; group mastering of reception in motion under the command of the trainer; conditional battle - "Battle with the shadow"; free fight (without limiting the actions of the enemy); mastering the reception with a teammate; conditional battle

Table 1

The level of physical fitness of children 12-14 years in the period training year
(according to the CYSS program)

	X1 I testing (August)	X2 II testing (November)	X3 III testing (January)
Pull-ups on the crossbar (number / times)	4,70	5,20	6,10
Squats (number / times)	47,00	55	60
Long jump from a place (cm)	145	165	180
Running 60m (s)	9,6	9,4	9,2
Running 800m (min / s)	4,40	4,35	4,20
"Shuttle run" 4 * 10 m (s)	10,80	10,65	10,30
Lifting the torso from a supine position (number / times)	24,6	28,9	35
Flexion of extension of arms in an emphasis lying down (number / times)	25	29	34

X1 - arithmetic mean and testing; X2 - the arithmetic mean of the second test;
X3 is the arithmetic mean of the III test (at $p < 0,05$).

with a narrow, specific task and limited actions of opponents; bag work is force work. As a rule, the average tempo alternates with spurts, sharp increases in tempo for a short period of time.

The training method provided for the gradual complication of the load as the adaptive, functional capabilities of the body of a given age and the general mastery of these exercises during the preliminary basic training of kickboxers. It was applied twice a week with some variable changes and a choice of individual exercises for more advanced practice of technical elements and techniques in general.

Results. The results of pedagogical observation revealed an increase in the skills of young kickboxers. With extensive experience in this area, systematically monitoring the training process, we can confidently say about improving the technical performance of their students. In training, we saw a trend of change in mastery and improved strikes "Low Kick" and "Front Kick", as athletes freely restructure their movements depending on our installation, guided by the stock of

their own skills and abilities. Carrying out pedagogical supervision we paid attention to correctness, quality, rationality, purposefulness of blows "Low-kick" and "Front-kick", devoted time to working out of technical movements of separate elements of blow and receptions as a whole that further gave us the vision of growth of indicators. In the conducted testing.

According to the results of testing physical fitness, we see an improvement in performance during the study (table 1). We did not deviate from the CYSS work program and did not supplement it. The emphasis was on learning the technique of strikes "Low-kick" and "Front-kick". Given the growth of indicators of physical fitness suggests that the method that we have recommended and implemented has not affected the stagnation of indicators of development of physical qualities.

As for the results of the level of technical readiness, it is advisable to state the effectiveness of our proposed methodological program, which demonstrates the changes during our study. The tools used

were not difficult to study and improve the skills of young kickboxers. The attention paid to the correctness of the blows was not in vain. At the end of the experiment, we received a quantitative increase in strokes for the regulated time (Table 2), more economical and rational implementation of techniques that were evaluated in the competitive activities of our athletes.

Given that most of the statistical deviations at the end of the study were found ($p < 2.38$), this indicates that on average the individual values of the variance deviate from their mean value not much, that is, the standard deviation. The results of the study show that athletes have a more effective right foot, so they have a more uniform coefficient of variation compared to the left foot.

Discussion. Many domestic and foreign figures pay attention to a promising, relatively new direction of sports [1, 2, 3, 10]. Each of them is looking for new tools, methods to improve various aspects of training. Given the opinion [1, 4] that kickboxing is a fairly technical sport and which aims to constantly improve the results not only at the stage of

Table 2

The level of technical readiness of children 12-14 years in selected exercises
(according to the CYSS program)

Control test	The leg that a blow is performed	Statistical indicators (n = 10)			
		X1	X2	σ	V
Front-kick strike in 30 seconds (number of times)	Left	17,80	18,70	2,16	11,57
	Right	18,90	19,90	1,29	6,47
Low-kick in 30 seconds (number of times)	Left	19,60	21,90	2,38	10,86
	Right	22,10	24,70	1,25	5,07
Low-kick in pairs (number of times)	Left	5,70	6,90	0,74	10,69
	Right	6,90	7,70	0,95	12,32
Front-kick in pairs (number of times)	Left	8,00	8,30	0,95	11,43
	Right	8,80	9,40	0,97	10,28

X1 - the arithmetic mean at the beginning of the study; X2 - arithmetic mean at the end of the study; σ is the standard deviation at the end of the study; V - variation of sample homogeneity at the end of the study (at $p < 0,05$).

high sportsmanship, but also the earliest stages of long-term training [3], makes it possible to increase the arsenal of search and disclosure of the smallest chains of technical skill, to explore different techniques, age characteristics of kickboxers at different stages of improvement. Therefore, it can be argued that the proposed and experimentally proven by us methodical program at the stage of pre-basic training, in the age range of 12-14 years will serve as an additional method to improve the technical skills of young kickboxers.

Conclusion. Our research, aimed at developing the technical skills of young kickboxers through in-depth study of the simplest strokes, showed the effectiveness of training athletes 12-14 years at the pre-basic stage of training. During the experiment it was possible to observe gradual changes in economy, rationality, sequence, accuracy of execution of blows. The success of training in the technical actions of the athlete is largely related to the level of development of physical and functional capabilities of the body of this age range. Namely, the improvement of sports results is possible if the technique of the exer-

cise is based on a certain level of development of physical abilities. Creating the basis of sports equipment on the basis of a sufficient level of physical abilities allows you to effectively realize the motor potential of a kickboxer at different stages of qualification.

In the analysis of literature sources and regulations, it was found that kickboxing is very popular in the world and the study of technology and its improvement is an integral part of training [1, 2, 5, 11]. Mastering the technique of kickboxing by athletes is a process of developing skills and abilities that provide effective combat in this type of martial arts [2]. This process is characterized by the search and development of the optimal movement based on the idea of it, the capabilities of the kickboxer as a result of a number of attempts to perform this movement in standard and variable conditions, in different functional states. This is a long and arduous work, the result of which should be the achievement of a high degree of automation, reliability, compliance with the specified model. The meaning of testing the connection is that in a battle with any opponent,

you can build the whole fight as a continuous chain of learned combinations, avoiding unnecessary and chaotic movements.

Conducted testing on physical training, showed that athletes have the dynamics of growth indicators of physical and technical training. All athletes improved their personal performance in their range of capabilities. It can also be concluded that many athletes have more developed right leg, so the blows with the right foot have a uniform coefficient of variation, and the left foot - not homogeneous. The obtained results can be used for purposeful and accentuated improvement of the level of indicators of the level of technical readiness in the educational and training process of kickboxing at this stage of training. In addition, they can be used to individualize training, developing in athletes the lagging elements of the basic strokes necessary for successful training of honed kickboxing techniques. Prospects for further research are the development of methodological programs to improve other basic kicks at the stage of preliminary basic training and their implementation in the process of competitive activities.

Література

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